

**DATA REQUEST #21**  
**SOIL & WATER RESOURCES**

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**BACKGROUND**

Potential impacts from erosion and siltation can result from the alteration of an area's natural drainage pattern. These impacts will be mitigated at the Niland Gas Turbine Plant site by routing all on-site and off-site stormwater into three detention basins. A large basin, designed to capture all the stormwater which originates onsite in a 24-hour, 100-year storm event, will detain onsite flows and allow them to evaporate. Two smaller basins will collect offsite stormwater, hold it long enough to lessen peak flow velocity, and discharge it to natural channels or allow it to evaporate. These two smaller basins are not designed for any particular storm event. Figure 2.2-6 shows the preliminary grading plan and pre- and post-construction drainage patterns for the site. Staff's understanding is that stormwater detention basins have limited effectiveness for trapping sediment and stormwater during large rain events. Basins must be carefully designed and maintained to prevent overflow and sediment buildup, and must be configured to discharge water at a controlled rate that will not cause downstream erosion.

**DATA REQUEST**

21. Identify whether outfalls on the off-site basins will be designed to discharge water at a controlled rate which will prevent scouring and erosion of downstream channels.

**DATA RESPONSE**

21. Outfalls from the offsite detention basins, as well as the downstream conveyances, will be designed to minimize velocity and reduce the potential for erosion and scouring. Methods to achieve this objective will include, but are not limited to, design of a broad weir outfall structure, which flows into wide, low slope ditches. Ditches downstream of the basins shall be lined or contain rip-rap to prevent erosion in the vicinity of the gas line and to prevent any erosion of Beal Road.

The current Property where the Project is to be located experiences little rainfall over the course of the year. When there are significant storms, the resulting runoff can result in a sheet flow across the Property towards the Project Site. This flow comes from the northeast corner and flows towards the southwest. When the flow exits along the southern boundary of the Property, it is collected in an existing drainage ditch that parallels Beal Road and exits at the southwest corner of the Property, flowing west.

The storm water that flows across the Property results primarily from rain falling in an area between the Project Site and the East Highline Canal. Storm water does flow towards the Property from the Chocolate Mountains. The flow out of the mountains is intercepted by both the Coachella Canal and the East Highline Canal, but can cross both canals at specific locations. As indicated by the arrows on the attachment SW-2, Watershed Figure, a major

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portion of this stormwater naturally flows to the north of the Project Site. A portion of the stormwater is also intercepted by the East Highline Canal and is in turn diverted by the canal. The stormwater flows that cross Cuff Road to the north follow drainage patterns that divert the stormwater north and west of the Property. Thus a significant portion of the rainfall in the Chocolate Mountains never reaches the Project Site.

The modifications to the Project Site will serve to better handle the storm water that already reaches the Project Site. All storm water that falls onto the Project Site itself will be contained in an evaporation basin that can hold at least 5" of rain - significantly more than the 100 year 24-hour storm event. Thus no storm water falling on the Project Site will be released. Stormwater that currently comes onto the Property and flows across it unimpeded will either continue to do so, or be intercepted by a series of berms and swales and directed into one of two detention basins. These basins serve to hold up the stormwater. In the event of very significant storms, water may flow out of the detention basins. However, this flow would be delayed and released in a controlled manner at a reduced flow rate. Thus, there will be a lesser impact to the overall Project Site, as well as to downstream properties, when compared to the current situation.